

Amendments to the Claims

Please amend the claims of the present application as set forth below.

Claims 1 – 37 were originally filed.

New Claims 38 – 43 are added in this response.

Claims 1 – 43 are pending.

1. (original) A method for controlling access to a server device by at least one client device that is operatively coupled to the server device through at least one interconnecting network, the method comprising:

causing a user-side portion of a network server logic within the server device to selectively specify at least one network from which the user-side portion would accept client device information; and

causing a kernel-side portion of the network server logic to accept the client device information only if the client device information has been provided via the specified network.

2. (original) The method as recited in Claim 1, further comprising: if the client device information has not been provided via the specified network, causing the kernel-side portion to reject the client device information and notify the client device in a manner that identifies the rejection.

3. (original) The method as recited in Claim 2, wherein the kernel-side portion notifies the client device using at least one message selected

1 from a group of messages comprising a TCP reset message and an ICMP
2 destination unreachable message, as applicable.

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4 4. (original) The method as recited in Claim 1, further comprising:
5 providing a communication socket for use by the kernel-side portion; and
6 causing the kernel-side portion to compare client device information
7 received on the communication socket to the specified network.

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9 5. (original) The method as recited in Claim 1, wherein causing the
10 user-side portion to selectively specify at least one network from which the user-
11 side portion would accept the client device information, further includes causing
12 the user-side portion to selectively specify a plurality of networks from which the
13 user-side portion would accept the client device information; and

14 wherein causing the kernel-side portion to accept the client device
15 information only if the client device information has been provided via the
16 specified network, further includes causing the kernel-side portion to accept the
17 client device information only if the client device information has been provided
18 via at least one of the specified plurality of networks.

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20 6. (original) The method as recited in Claim 1, wherein causing the
21 user-side portion to selectively specify the at least one network from which the
22 user-side portion would accept the client device information further includes
23 having the user-side portion specify at least one local network interface.

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1 7. (original) The method as recited in Claim 1, wherein causing the
2 user-side portion to selectively specify the at least one network from which the
3 user-side portion would accept the client device information further includes
4 having the user-side portion specify at least one IP address.
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7 8. (original) The method as recited in Claim 1, wherein the network
8 server logic is operatively configured to support at least one client-server based
9 process selected from a group of processes comprising a file-sharing
10 communication process, a TCP-based communication process, a UDP-based
11 communication process, a HTTP-based communication process, a digital media
12 based communication process, a DNS-based communication process, and a
13 database related communication process.
14

15 9. (original) The method as recited in Claim 1, wherein the user-
16 side portion includes an application-programming interface (API) operatively
17 configured to allow an application to specify the at least one network from which
18 the user-side portion would accept the client device information.
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20 10. (original) The method as recited in Claim 9, wherein the API is
21 further operatively configured to allow the application to specify a listing of
22 networks from which the user-side portion would accept the client device
23 information.
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11. (original) The method as recited in Claim 10, wherein the API is further operatively configured to allow the application to selectively modify the listing of networks from which the user-side portion would accept the client device information.

12. (original) The method as recited in Claim 1, wherein the kernel-side portion includes a TCP/IP driver.

13. (original) A computer-readable medium having computer-executable instructions for performing steps comprising:

causing a user-side portion of a network server logic within a server device to selectively specify at least one network from which the user-side portion would accept client device information; and

causing a kernel-side portion of the network server logic to accept the client device information only if the client device information has been provided via the specified network.

14. (original) The computer-readable medium as recited in Claim 13, further comprising computer-executable instructions for:

if the client device information has not been provided via the specified network, causing the kernel-side portion to reject the client device information and notify the client device in a manner that identifies the rejection.

15. (original) The computer-readable medium as recited in Claim 14, wherein the kernel-side portion notifies the client device using at least one

1 message selected from a group of messages comprising a TCP reset message and
2 an ICMP destination unreachable message, as applicable.

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4 16. (original) The computer-readable medium as recited in Claim 13,
5 further comprising computer-executable instructions for:

6 providing a communication socket for use by the kernel-side portion; and
7 causing the kernel-side portion to compare client device information
8 received on the communication socket to the specified network.

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10 17. (original) The computer-readable medium as recited in Claim 13,
11 wherein causing the user-side portion to selectively specify at least one network
12 from which the user-side portion would accept the client device information,
13 further includes causing the user-side portion to selectively specify a plurality of
14 networks from which the user-side portion would accept the client device
15 information; and

16 wherein causing the kernel-side portion to accept the client device
17 information only if the client device information has been provided via the
18 specified network, further includes causing the kernel-side portion to accept the
19 client device information only if the client device information has been provided
20 via at least one of the specified plurality of networks.

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22 18. (original) The computer-readable medium as recited in Claim 13,
23 wherein causing the user-side portion to selectively specify the at least one
24 network from which the user-side portion would accept the client device
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1 information further includes having the user-side portion specify at least one local
2 network interface.

3
4 19. (original) The computer-readable medium as recited in Claim 13,
5 wherein causing the user-side portion to selectively specify the at least one
6 network from which the user-side portion would accept the client device
7 information further includes having the user-side portion specify at least one IP
8 address.

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10 20. (original) The computer-readable medium as recited in Claim 13,
11 wherein the network server logic is operatively configured to support at least one
12 client-server based process selected from a group of processes comprising a file-
13 sharing communication process, a TCP-based communication process, a UDP-
14 based communication process, a HTTP-based communication process, a digital
15 media based communication process, a DNS-based communication process, and a
16 database related communication process.

17
18 21. (original) The computer-readable medium as recited in Claim 13,
19 wherein the user-side portion includes an application-programming interface (API)
20 operatively configured to allow an application to specify the at least one network
21 from which the user-side portion would accept the client device information.

22
23 22. (original) The computer-readable medium as recited in Claim 21,
24 wherein the API is further operatively configured to allow the application to
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1 specify a listing of networks from which the user-side portion would accept the
2 client device information.

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4 23. (original) The computer-readable medium as recited in Claim 22,
5 wherein the API is further operatively configured to allow the application to
6 selectively modify the listing of networks from which the user-side portion would
7 accept the client device information.

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9 24. (original) The computer-readable medium as recited in Claim 13,
10 wherein the kernel-side portion includes a TCP/IP driver.

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12 25. (original) A method for establishing per-socket interface listings,
13 the method comprising the steps of:

14 a) issuing, by a user-side application, at least one network identifier
15 from which the user-side application would accept client device information;

16 b) receiving, by a user-side portion of a network server process, the at
17 least one network identifier;

18 c) issuing, by the user-side portion, the at least one network identifier;
19 and

20 d) receiving, by a kernel-side portion of a network server process, the at
21 least one network identifier.

1 26. (original) An apparatus comprising:
2 memory; and
3 network server logic, operatively coupled to the memory and configurable
4 to support at least one client-server communication session, the network server
5 logic having:

6 a user-side portion that is configured to selectively specify at least one
7 network from which the user-side portion would accept client device information,
8 and

9 a kernel-side portion that is configured to accept the client device
10 information only if the client device information has been provided via the
11 specified network.

12
13 27. (original) The apparatus as recited in Claim 26, wherein if the
14 client device information has not been provided via the specified network, the
15 kernel-side portion is further configured to reject the client device information and
16 notify the client device in a manner that identifies the rejection.

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18 28 (original) The apparatus as recited in Claim 27, wherein the
19 kernel-side portion is configured to notify the client device using at least one
20 message selected from a group of messages comprising a TCP reset message and
21 an ICMP destination unreachable message, as applicable.
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1 29. (original) The apparatus as recited in Claim 26, further
2 comprising:

3 a communication socket for use by the kernel-side portion during the
4 communications session, and wherein the kernel-side portion is further configured
5 to compare client device information received on the communication socket to the
6 specified network.

7
8 30. (original) The apparatus as recited in Claim 26, wherein is
9 further configured to selectively specify a plurality of networks from which the
10 user-side portion would accept the client device information; and

11 wherein the kernel-side portion is further configured to accept the client
12 device information only if the client device information has been provided via at
13 least one of the specified plurality of networks.

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15 31. (original) The apparatus as recited in Claim 26, wherein the user-
16 side portion is further configured to specify at least one local network interface.

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18 32. (original) The apparatus as recited in Claim 26, wherein the user-
19 side portion is further configured to specify at least one IP address.
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1 33. (original) The apparatus as recited in Claim 26, wherein the
2 communication session is further configured to support at least one communication
3 process selected from a group of communication processes comprising a file-
4 sharing communication process, a TCP-based communication process, a UDP-
5 based communication process, a HTTP-based communication process, a digital
6 media based communication process, a DNS-based communication process, and a
7 database related communication process.

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9 34. (original) The apparatus as recited in Claim 26, wherein the user-
10 side portion includes:

11 an application-programming interface (API) operatively configurable to
12 allow an application to specify the at least one network from which the user-side
13 portion would accept the client device information.

14
15 35. (original) The apparatus as recited in Claim 34, wherein the API
16 is further operatively configurable to allow the application to specify a listing of
17 networks from which the user-side portion would accept the client device
18 information.

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20 36. (original) The apparatus as recited in Claim 35, wherein the API
21 is further operatively configurable to allow the application to selectively modify
22 the listing of networks from which the user-side portion would accept the client
23 device information.

1 37. (original) The apparatus as recited in Claim 26, wherein the
2 kernel-side portion includes a TCP/IP driver.

3
4 38. (new) A method for controlling connections to a server device
5 comprising:

6 creating a listening socket bound to a wildcard network interface;

7 specifying a list of local network interfaces on which connection is
8 permitted through the listening socket;

9 accepting a request for connection on the listening socket only if the request
10 is received on one of the local network interfaces specified in the list of local
11 network interfaces.

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13 39. (new) The method as recited in claim 38 further comprising:

14 receiving a request for connection on a network interface;

15 querying a network stack to determine the network interface on which the
16 request was received;

17 comparing the network interface to each of the local network interfaces
18 specified in the list of local network interfaces.

19
20 40. (new) The method as recited in claim 38 further comprising:

21 receiving a request for connection on a network interface;

22 identifying the network interface in the list of local network interfaces.

23
24 41. (new) The method as recited in claim 38 wherein the specifying
25 comprises specifying a list of internet protocol (IP) addresses.

1 42. (new) The method as recited in claim 38 further comprising: in
2 response to an application issuing a control message, adding a local network
3 interface to the list of local network interfaces.

4
5 43. (new) The method as recited in claim 38 further comprising: in
6 response to an application issuing a control message, deleting a local network
7 interface from the list of local network interfaces.